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(54) **SAFETY GATE**

(71) Applicant: **DEMBY DEVELOPMENT CO., LTD.**, New Taipei (TW)

(72) Inventor: **Tsung Hsiang Wang**, New Taipei (TW)

(73) Assignee: **DEMBY DEVELOPMENT CO., LTD.**, New Taipei (TW)

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E05B 65/00 (2006.01)
E06B 9/00 (2006.01)

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CPC ***E06B 9/04*** (2013.01); ***E05B 65/0007*** (2013.01); ***E05B 65/0014*** (2013.01); *E06B 2009/002* (2013.01)

(58) **Field of Classification Search**
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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,702,036 A * 10/1987 Johnson E06B 9/02 49/394
6,016,629 A * 1/2000 Sylvester E05B 65/0007 49/394
6,112,460 A * 9/2000 Wagnitz E06B 9/04 49/394
8,713,851 B2 * 5/2014 Flannery E05B 65/0007 49/55
2010/0290830 A1 * 11/2010 Cheng E06B 9/02 403/290

(Continued)

FOREIGN PATENT DOCUMENTS

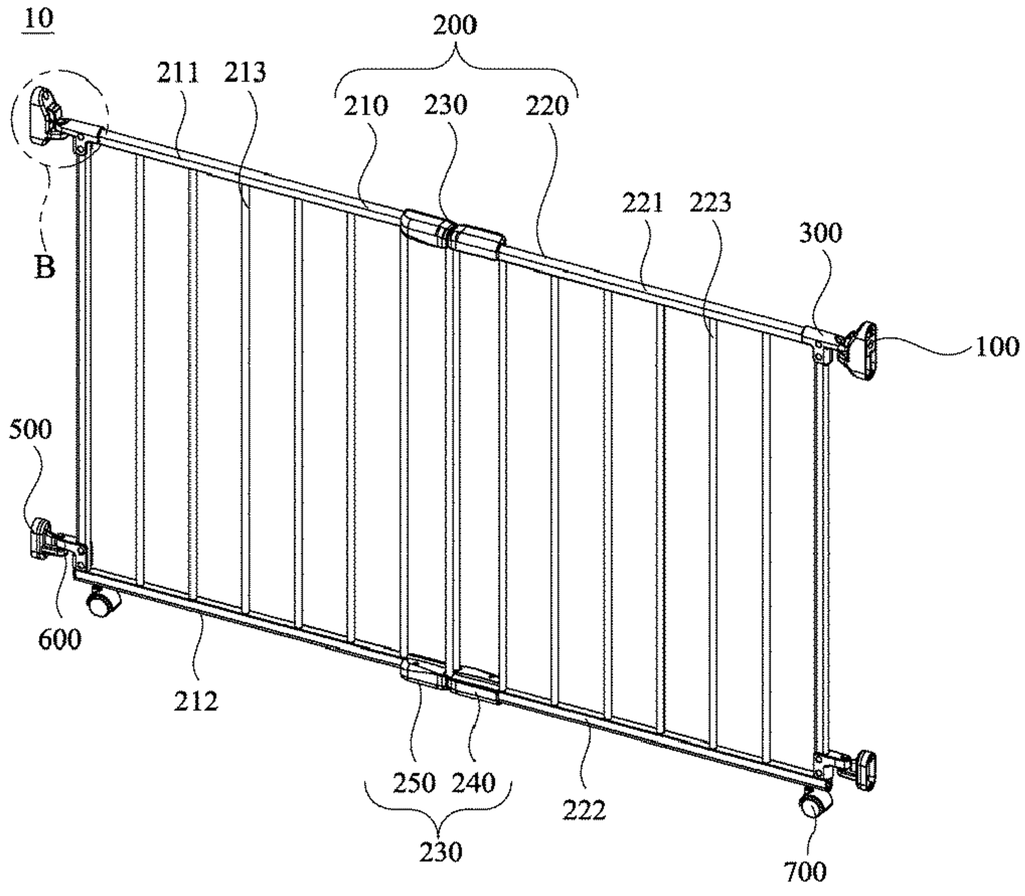
GB 2499231 A * 8/2013 ..... E05B 63/24

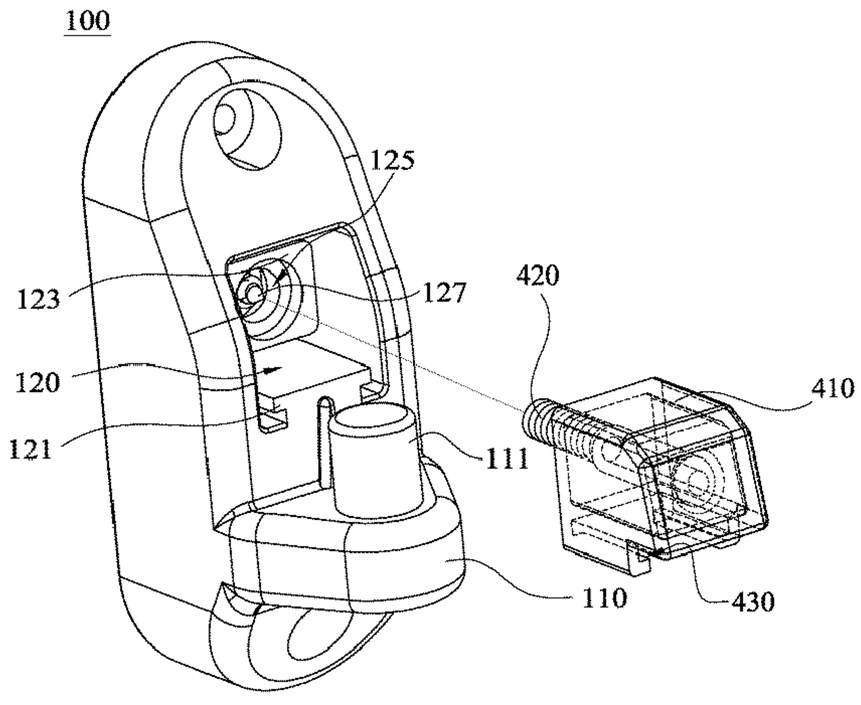
Primary Examiner — Marcus Menezes
(74) *Attorney, Agent, or Firm* — Alan D. Kamrath; Karin L. Williams; Mayer & Williams PC

(57) **ABSTRACT**

A safety gate has two wall-mounted post assemblies, a main frame, and two connecting assemblies. The wall-mounted post assemblies are mounted on walls on two sides of the entrance. The main frame has a first frame portion, a second frame portion, and a sliding set. The sliding set connects the first frame portion and the second frame portion so the first frame portion and the second frame portion can slide with respect to each other to adjust an overlapping area. The connecting assemblies are mounted on two sides of the main frame and detachably mounted on the wall-mounted post assemblies. Therefore, the main frame is detachably mounted on the walls. Besides, the first frame portion and the second frame portion can be moved with respect to each other, so the occupied space is smaller and it is easy to control the blocked range of the entrance.

8 Claims, 8 Drawing Sheets





(56) **References Cited**

U.S. PATENT DOCUMENTS

2012/0324796	A1*	12/2012	Wang	E06B 9/0623 49/421
2014/0190641	A1*	7/2014	Wang	E06B 9/06 160/222
2015/0089873	A1*	4/2015	Marsden	E06B 9/02 49/56
2017/0058595	A1*	3/2017	Marsden	E05B 65/0007
2017/0211314	A1*	7/2017	Raffi	E06B 9/04
2017/0306693	A1*	10/2017	Potter	E04B 2/7427
2019/0085620	A1*	3/2019	Wang	E06B 9/0638
2020/0063488	A1*	2/2020	Wang	E06B 9/04
2021/0079700	A1*	3/2021	Wang	E05D 3/02

* cited by examiner

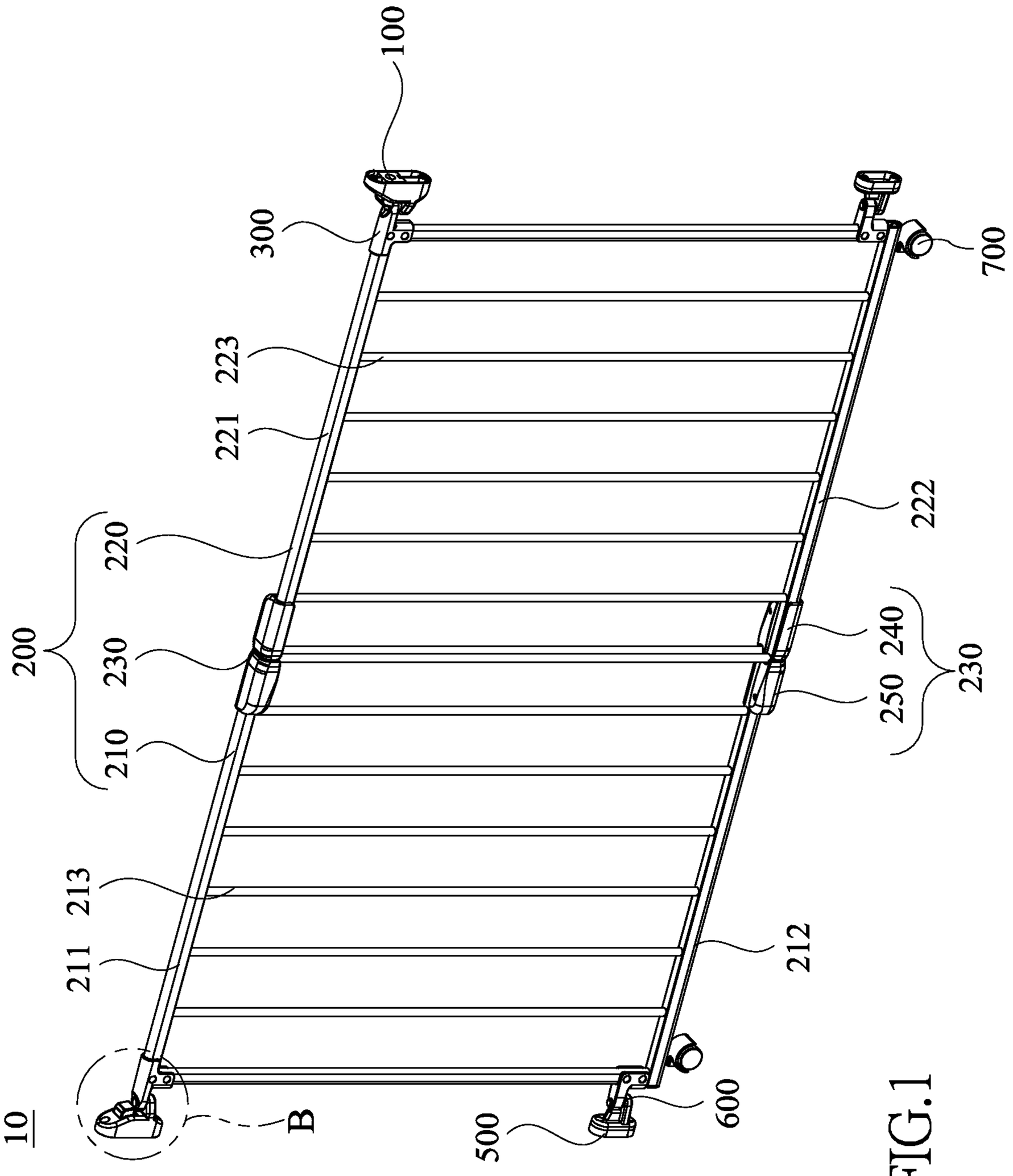

100
300
700
223
221
222
220
200
230
240
250
230
210
213
211
212
10
B
500
600

FIG.1

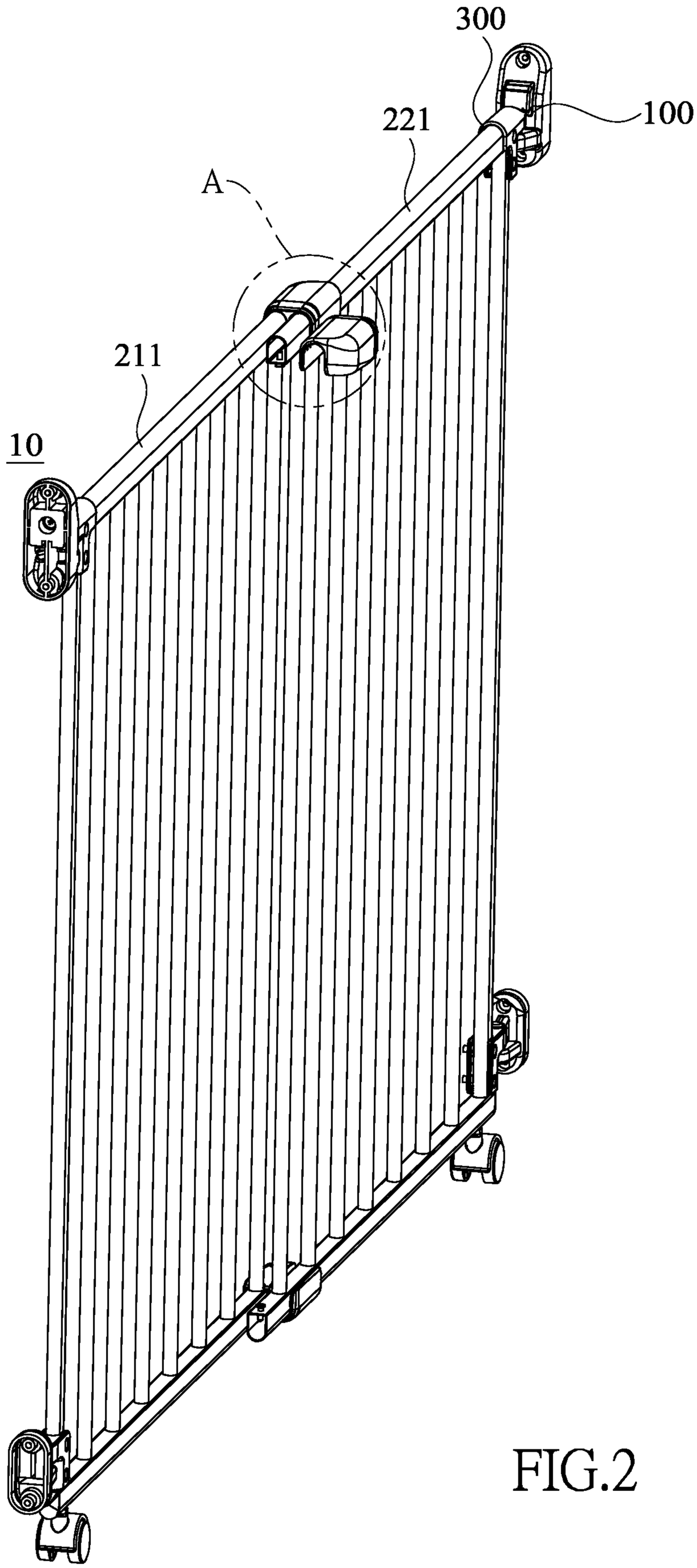


FIG.2

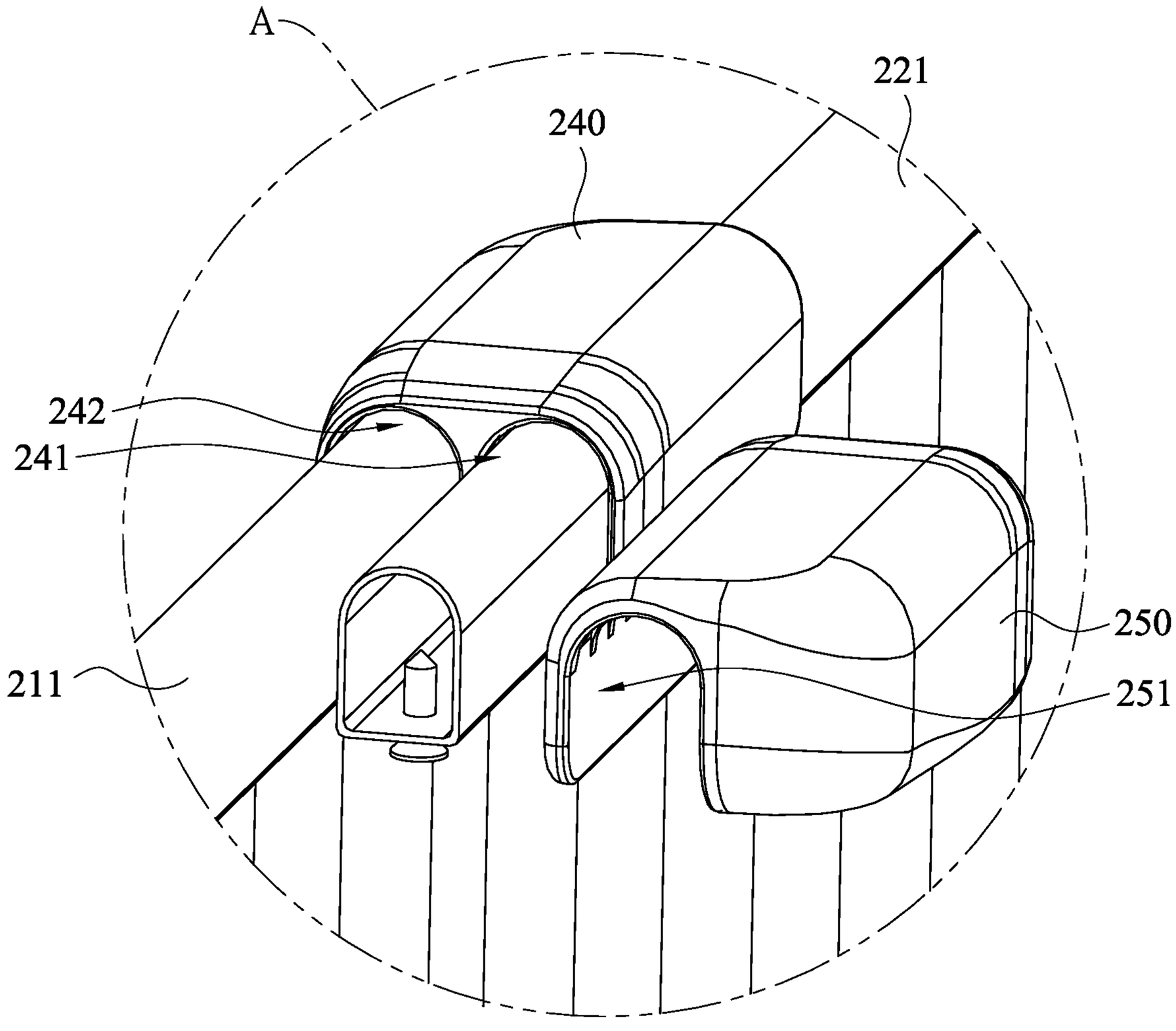


FIG.3

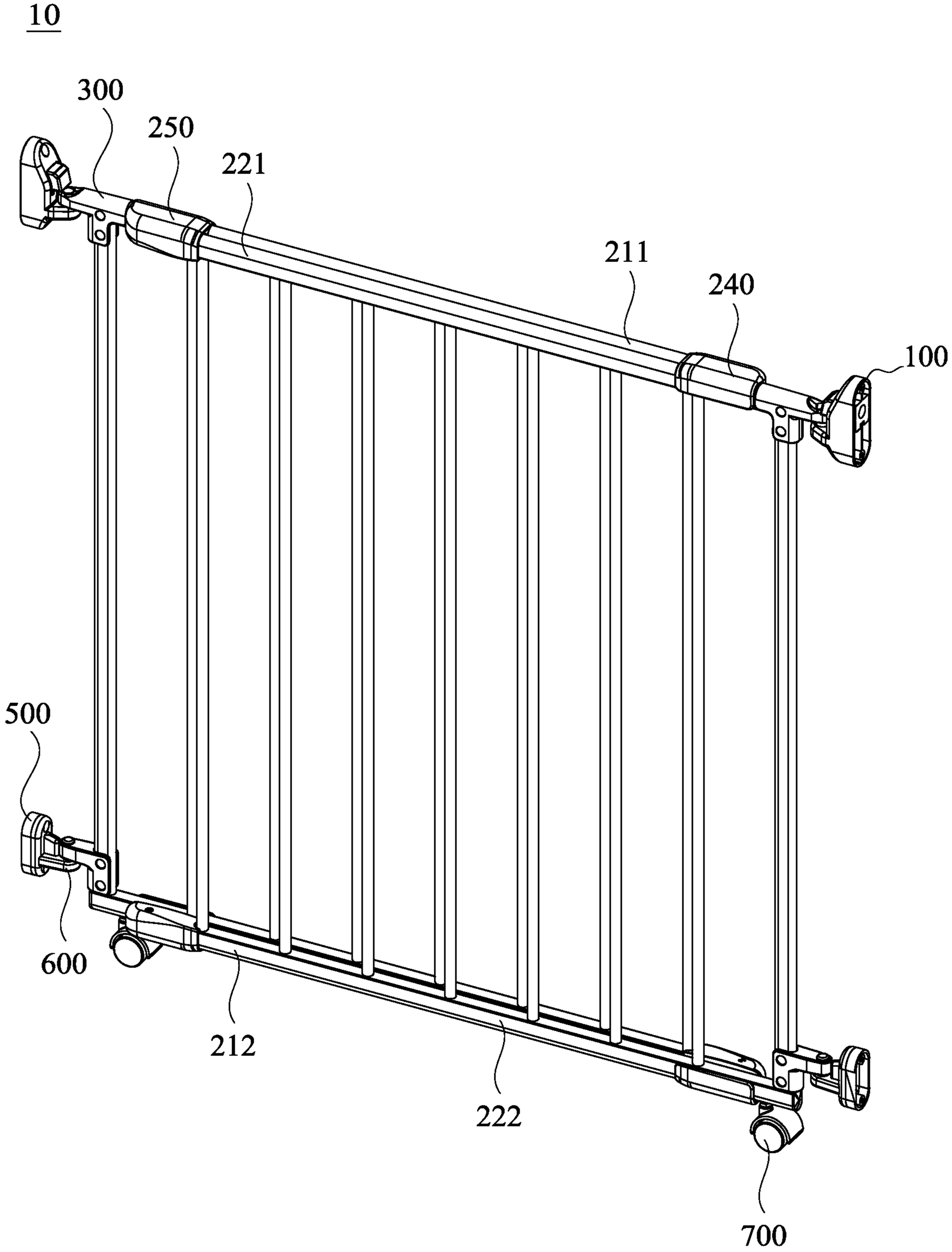


FIG.4

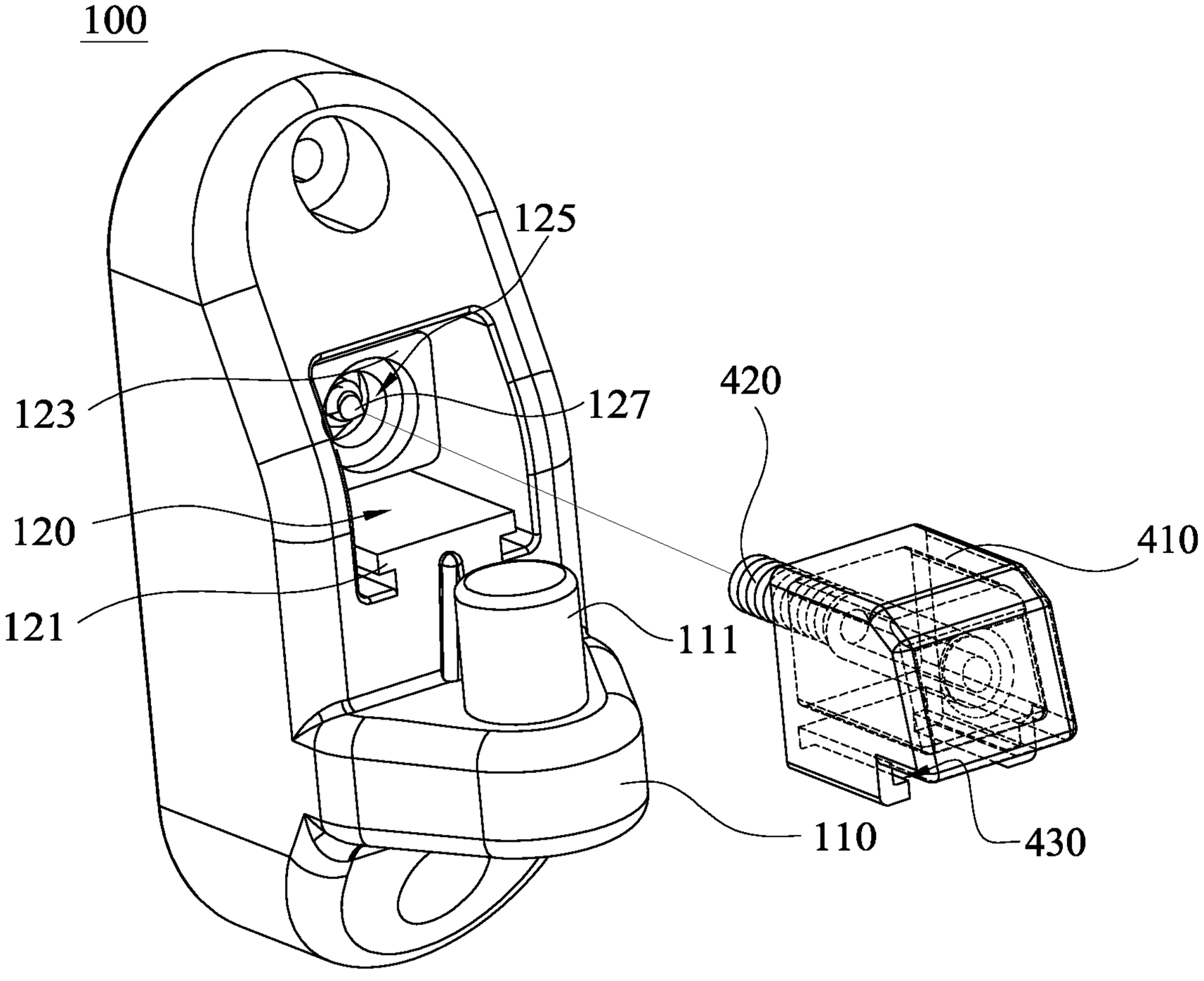


FIG.5

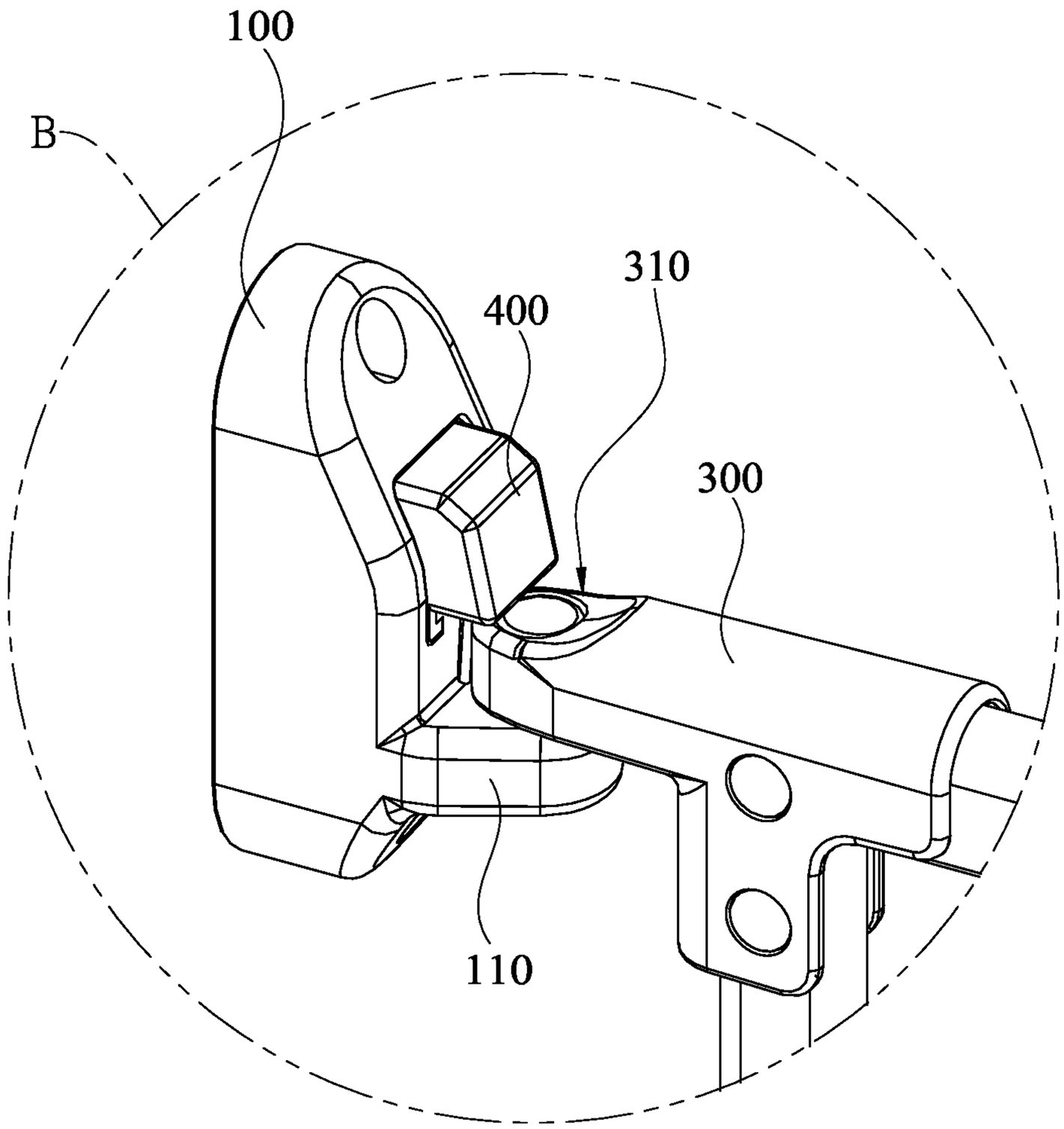


FIG.6

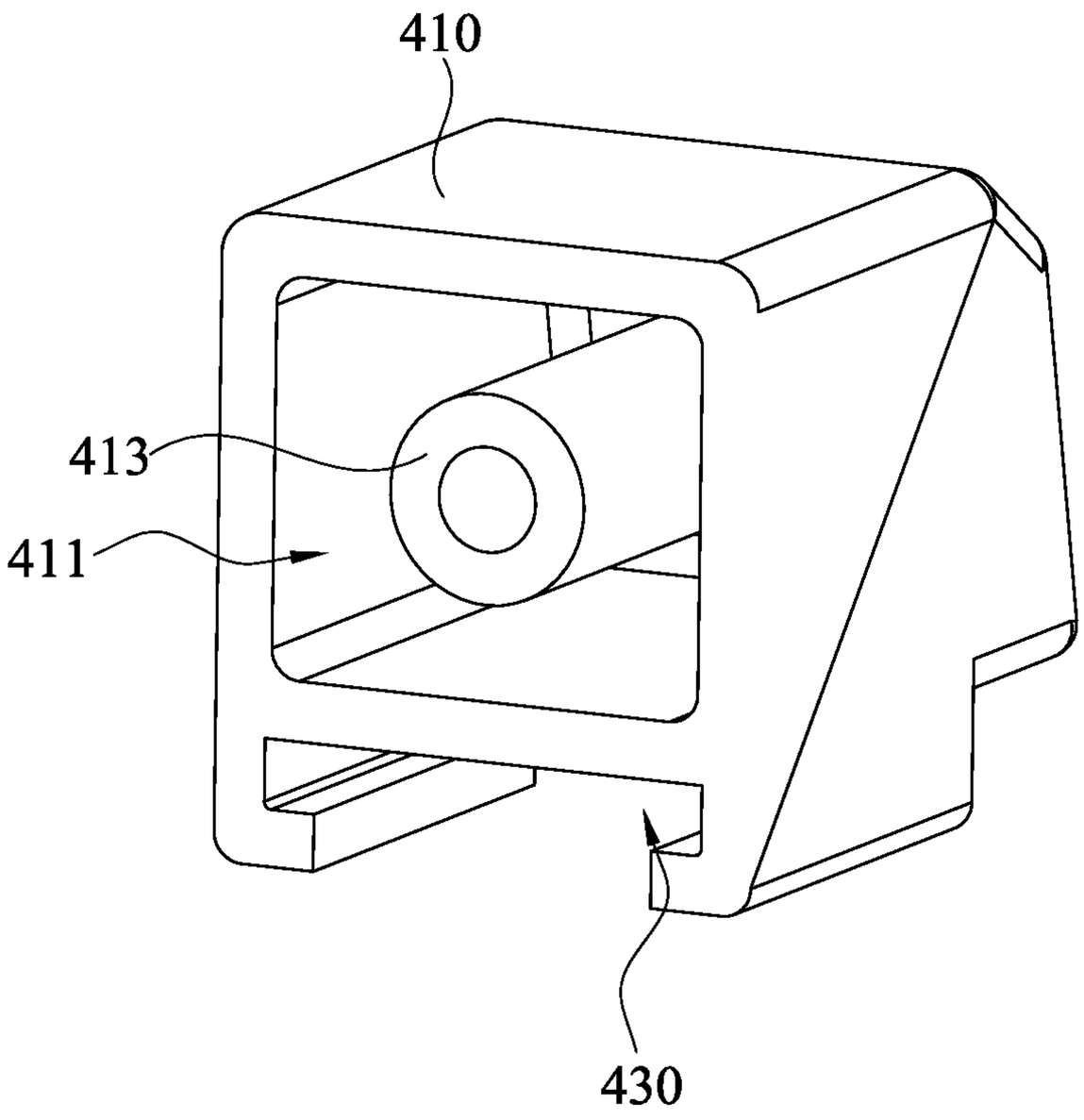


FIG.7

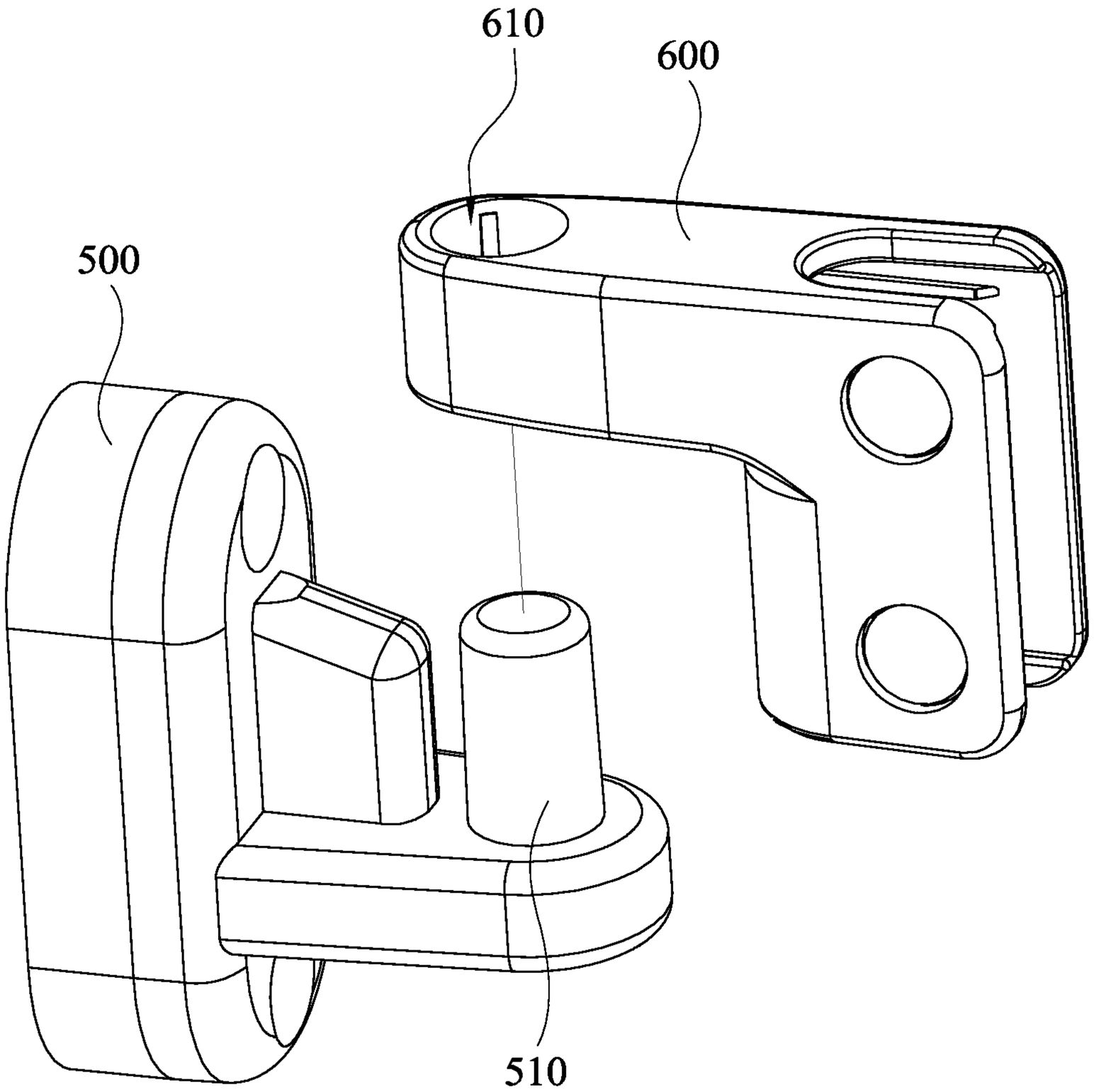


FIG.8

SAFETY GATE

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is based upon and claims priority under 35 U.S.C. 119 from China Patent Application No. 201920583470.3 filed on Apr. 26, 2019, which is hereby specifically incorporated herein by this reference thereto.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a safety gate.

2. Description of the Prior Arts

A safety gate is mounted at an entrance of a building or an area for controlling access to the building or area.

The conventional safety gate and the wall-mounted post assemblies thereof are hard to be assembled and inconvenient to use because an occupied space of the conventional safety gate is large. Besides, a width of the conventional safety gate cannot be adjusted so the conventional safety gate cannot adapt to entrances with difference widths, which is also inconvenient.

To overcome the shortcomings, the present invention provides a safety gate to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

The main objective of the present invention is to provide a safety gate, the occupied space thereof being smaller and a blocked range of the entrance being adjustable.

The safety gate has two wall-mounted post assemblies, a main frame, and two connecting assemblies. The two wall-mounted post assemblies are respectively mounted on two walls of two sides of an entrance. The main frame is configured to block the entrance and comprises a first frame portion, a second frame portion, and at least one sliding set. The at least one sliding set connects the first frame portion and the second frame portion and thereby the first frame portion and the second frame portion are capable of sliding with respect to each other for adjusting an overlapping area of the first frame portion and the second frame portion. The two connecting assemblies are respectively mounted on two ends of the main frame. Each one of the connecting assemblies is detachably connected to a respective one of the wall-mounted post assemblies.

Therefore, with the aforesaid safety gate, the main frame is detachably connected on the walls on two sides of the entrance via the connecting assemblies and the wall-mounted post assemblies, so the main frame is easy to be detached. Besides, the first frame portion and the second frame portion are movably connected by the sliding set, and the overlapping area of the first frame portion and the second frame portion can be adjusted to block the entrance or let the entrance open. With the first frame portion and the second frame portion being movable in the extending directions thereof, compared to opening and closing the entrance via the pivotal first frame portion and the second frame portion, the occupied space is smaller and a blocked range of the entrance can be adjusted arbitrarily.

Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a safety gate in accordance with the present invention, shown in a first state;

FIG. **2** is another perspective view of the safety gate in FIG. **1**;

FIG. **3** is an enlarged view of the safety gate of a portion A in FIG. **2**;

FIG. **4** is another perspective view of the safety gate in FIG. **1**, shown in a second state;

FIG. **5** is a perspective view of a stopping block and a wall-mounted post assembly of the safety gate in FIG. **1**;

FIG. **6** is an enlarged view of the safety gate of a portion B in FIG. **1**;

FIG. **7** is a perspective view of the stopping block of the safety gate in FIG. **1**; and

FIG. **8** is a perspective view of a first auxiliary connecting assembly and a second auxiliary connecting assembly.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In order to facilitate the understanding of the present invention, the present invention will be described more fully hereinafter with reference to the accompanying drawings. A preferred embodiment of the present invention is shown in the drawings. However, the invention may be embodied in many different forms and is not limited to the embodiments described herein. Rather, these embodiments are provided so that this disclosure will be more fully understood.

It should be noted that when a component is referred to as being "fixed" to another component, it can be directly mounted on said another component or still another component may be disposed between the component and said another component. When a component is considered to be "connected" to another component, it can be directly connected to said another component or still another component may be disposed between the component and said another component. The terms "vertical," "horizontal," "left," "right," and the like, as used herein, are for the purpose of illustration and are not intended to be the only embodiment.

All technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art. The terminology used in the description of the present invention is for the purpose of describing particular embodiments and is not intended to limit the invention. The term "and/or" used herein includes any and all combinations of one or more of the associated listed items.

Please refer to FIG. **1**. The safety gate **10** of the present invention is configured to block an entrance.

One of the embodiments of the safety gate **10** of the present invention comprises at least one wall-mounted post assembly **100**, a main frame **200**, and at least one connecting assembly **300**. The at least one wall-mounted post assembly **100** is mounted on a wall of the entrance and the at least one connecting assembly **300** is detachably mounted on the at least one wall-mounted post assembly **100**.

The main frame **200** comprises a first frame portion **210**, a second frame portion **220**, and a sliding set **230**. The first frame portion **210** and the second frame portion **220** are parallel to each other. The sliding set **230** connects the first frame portion **210** and the second frame portion **220**, and

thereby the first frame portion **210** and the second frame portion **220** are capable of sliding with respect to each other, which adjusts an overlapping area of the first frame portion **210** and the second frame portion **220**. In this embodiment, an amount of the at least one wall-mounted post assembly **100** is two, and an amount of the at least one connecting assembly **300** is two. The two connecting assemblies **300** are respectively and securely mounted on two ends of the main frame **200** and respectively and detachably mounted on the two wall-mounted post assemblies **100**.

In the aforesaid embodiment of the safety gate **10** of the present invention, the main frame **200** can be mounted on the walls via the connecting assemblies **300** and the wall-mounted post assemblies **100**, and the main frame **200** is easy to be installed on or detached from the walls. Besides, the overlapping area of the first frame portion **210** and the second frame portion **220** can be adjusted via the sliding set **230**, which blocks the entrance or lets the entrance open. The first frame portion **210** and the second frame portion **220** are capable of sliding with respect to each other in extending directions thereof, so the first frame portion **210** or the second frame portion **220** only can be moved along a straight line. Compared to a conventional safety gate which has a first frame portion and a second frame portion that can pivot with respect to each other to block or open the entrance, the safety gate **10** of the present invention has a smaller occupied space and a blocked range in the entrance can be adjusted arbitrarily.

In a preferred embodiment, the first frame portion **210** may comprise a first lateral rod **211**, a second lateral rod **212**, and a plurality of first support rods **213**. Two ends of each one of the first support rods **213** are respectively connected to the first lateral rod **211** and the second lateral rod **212**. Also, the second frame portion **220** may comprise a third lateral rod **221**, a fourth lateral rod **222**, and a plurality of second support rods **223**. Two ends of each one of the second support rods **223** are respectively connected to the third lateral rod **221** and the fourth lateral rod **222**.

Then please also refer to FIG. **2** and FIG. **3**. The sliding set **230** may comprise a first sliding component **240** and a second sliding component **250**. The first sliding component **240** and the second sliding component **250** are connected to each other. The first sliding component **240** is mounted on one end of the first lateral rod **211** via a screw. The first sliding component **240** forms a first sliding channel **241** and a first fixing chamber **242**, and the first fixing chamber **242** and the first sliding channel **241** extend parallel to each other. Said one end of the first lateral rod **211** is securely mounted in the first fixing chamber **242** and the third lateral rod **221** is movably mounted in the first sliding channel **241**, so the first sliding component **240** and the first lateral rod **211** are capable of moving along the third lateral rod **221**.

The second sliding component **250** is mounted on one end of the third lateral rod **221** via a screw. The second sliding component **250** forms a second sliding channel **251** and a second fixing chamber (not shown in the drawings), and the second fixing chamber and the second sliding channel **251** extend parallel to each other. Said one end of the third lateral rod **221** is securely mounted in the second fixing chamber and the first lateral rod **211** is movably mounted in the second sliding channel **251**, so the second sliding component **250** and the third lateral rod **221** are capable of moving along the first lateral rod **211**.

Also, the sliding set **230** may comprise another first sliding component **240** and another second sliding component **250** mounted on the second lateral rod **212** and the fourth lateral rod **222**. Therefore, the second lateral rod **212** and the fourth lateral rod **222** are also connected and thereby the first frame portion **210** and the second frame portion **220** may slide more stably. Besides, if an upper part and a lower part of the first frame portion **210** or the second frame portion **220** slide simultaneously, at the same time, the entrance is open or is blocked at an upper side and a lower side. In other words, the first frame portion **210** or the second frame portion **220** may be moved entirely rather than leave a threshold when the entrance is open, which prevents people stumbling against the threshold.

In a preferred embodiment, the first frame portion **210** and the second frame portion **220** can be moved to a first state and a second state. Please refer to FIG. **1**. In the first state, the first sliding component **240** and the second sliding component **250** abut each other and block the entrance. Then please refer to FIG. **4**. In the second state, the overlapping area of the first frame portion **210** and the second frame portion **220** is the largest. An opened width of the entrance may equal to a width of the first frame portion **210** or the second frame portion **220**. In this embodiment, the first state or the second state stands for limiting positions of the first frame portion **210** and the second frame portion **220**. A user can open the entrance to a specific width, so the safety gate **10** can be used in various situations. Specifically, when the entrance is open or is blocked by the safety gate **10**, the user can arbitrarily operate the first frame portion **210** or the second frame portion **220** to slide with respect to each other, so the safety gate **10** is convenient to use.

Then please refer to FIG. **5**. In a preferred embodiment, a seat **110** is mounted on a side, near the main frame **200**, of each one of the wall-mounted post assemblies **100**. A connecting post **111** is mounted on the seat **110**. Then also please refer to FIG. **6**. Each one of the connecting assemblies **300** forms a connecting hole **310**. The connecting hole **310** is located on and around the connecting post **111**, which causes the connecting assembly **300** to be separated from the corresponding wall-mounted post assembly **100** easier. When someone wants to pass through the entrance, after one of the connecting assemblies **300** is separated from the connecting post **111**, the user can move the first frame portion **210** or the second frame portion **220** to open the entrance partially, or detach the connecting assemblies **300** from the wall-mounted post assemblies **100** to open the entrance thoroughly and thus it is easier to pass through.

Precisely, the safety gate **10** is convenient to be installed and removed because of aforesaid structures of the wall-mounted post assemblies **100** and the connecting assemblies **300**. Besides, the safety gate **10** can be installed at various circumstances. For example, normally, walls on two sides of an entrance may be parallel to each other, and thus the safety gate **10** may be installed normally. However, if walls on two sides of another entrance are staggered from each other, a frame portion of a conventional safety gate may be interfered by the walls when pivoted, so said safety gate cannot adapt to this circumstance. On the contrary, the safety gate **10** of the present invention is capable of being installed in such circumstance. Precisely, after the wall-mounted post assemblies **100** are mounted on the two walls on the two sides of the entrance and the connecting assemblies **300** are mounted on the wall-mounted post assemblies **100**, because the first frame portion **210** and the second frame portion **220** can slide with respect to each other, the main frame **200** will not be interfered by the walls.

In another embodiment, the connecting assemblies **300** may be integrally formed on the first frame portion **210** or the second frame portion **220**, or the safety gate **10** may not have any connecting assembly **300** but holes are formed on

the first frame portion **210** and the second frame portion **220** to receive the connecting posts **111**.

In this embodiment, the safety gate **10** may further comprise two stopping assemblies **400** mounted on a respective one of the wall-mounted post assemblies **100**. Precisely, each one of the stopping assemblies **400** is mounted on a side of a corresponding one of the wall-mounted post assemblies **100**. Said side of the wall-mounted post assembly **100** is close to the main frame **200**. Each one of the stopping assemblies **400** is capable of extending elastically in the corresponding wall-mounted post assembly **100** and thereby is configured to limit the connecting assembly **300** connected on the corresponding wall-mounted post assembly **100** in position. Therefore, the connecting assemblies **300** and the wall-mounted post assemblies **100** are connected stably.

In a preferred embodiment, each one of the wall-mounted post assemblies **100** forms an installing chamber **120**. The installing chamber **120** is configured to receive one of the stopping assemblies **400**. Each one of the stopping assemblies **400** comprises a stopping block **410** and an elastic component **420**. One end of the elastic component **420** is mounted in the installing chamber **120** and another end of the elastic component **420** is connected to the stopping block **410**. The stopping block **410** and the seat **110** are spaced from each other. The elastic component **420** exerts an elastic force on the stopping block **410**, which limits the connecting assembly **300** between the stopping block **410** and the seat **110** by the stopping block **410** and prevents the connecting assembly **300** from being detached from the connecting post **111**.

Specifically, when the user wants to open the safety gate **10**, the user may press the stopping block **410** to move the stopping block **410** away from the corresponding connecting assembly **300**. After the stopping block **410** withdraws into the installing chamber **120**, the user can lift the connecting assembly **300** to separate from the connecting post **111**, and thereby the first frame portion **210** or the second frame portion **220** is detached from the corresponding wall-mounted post assembly **100**. Then, the user pivots the first frame portion **210** or the second frame portion **220** to completely open the safety gate **10** of the present invention.

When the user does not want the safety gate **10** to block the entrance, just like opening the safety gate **10**, the user may press the two stopping blocks **410** on both sides at the same time or successively make the first frame portion **210** separate from the corresponding wall-mounted post assembly **100** and the second frame portion **220** separate from the corresponding wall-mounted post assembly **100**. Thus, the main frame **200** can be detached.

When the user wants to mount the main frame **200** on the wall-mounted post assemblies **100**, the user can press the stopping blocks **410** to respectively move away from the corresponding connecting assemblies **300** so that the stopping blocks **410** withdraw into the corresponding installing chambers **120**. Then, the user respectively sleeves the connecting assemblies **300** on the connecting posts **111** and releases the stopping blocks **410**, such that the stopping blocks **410** move toward the corresponding connecting assembly **300** via the elastic components **420** and extend out of the corresponding installing chambers **120**. Therefore, the connecting assemblies **300** are limited between the stopping blocks **410** and the corresponding seats **110**. In other words, the connecting assemblies **300** are fixed, i.e., the first frame portion **210** and the second frame portion **220** are respectively locked on the corresponding wall-mounted post assemblies **100**, and thereby the safety gate is installed completely.

Then please refer to FIG. **5** and FIG. **7**. In a preferred embodiment, each one of the installing chambers **120** comprises a guiding track **121** on a bottom surface of the installing chamber **120**. Each one of the stopping blocks **410** comprises a slide slot **430** connected to the guiding track **121**. The slide slot **430** is capable of sliding with respect to the connected guiding track **121**, which guides the guiding block **410** during moving in the installing chamber **120** and will not deviate.

Further, each one of the stopping blocks **410** forms a guiding chamber **411** and each one of the installing chambers **120** comprises a guiding block **123** therein. The sectional shape and sectional size of the guiding block **123** and the sectional shape and sectional size of the guiding chamber **411** are the same. Each one of the elastic components **420** connects a respective one of the guiding chambers **411** and a respective one of the guiding blocks **123**. The guiding chamber **411** and the guiding block **123** are configured to guide the stopping block **410** together, which prevents the stopping block **410** from deviating from a predetermined direction during movement. Therefore, the stopping block **410** can be moved in the installing chamber **120** stably.

In a preferred embodiment, the guiding block **123** comprises an installing hole **125** and a first guiding component **127**. The first guiding component **127** is mounted in the installing hole **125**. The stopping blocks **410** each comprise a second guiding component **413** in the guiding chamber **411**. One end of the elastic component **420** is mounted on the first guiding component **127** and another end of the elastic component **420** is mounted on the second guiding component **413**, which guides the elastic component **420** and prevents the elastic component **420** from being bent during compression or stretching.

Then please refer to FIG. **1** and FIG. **8**. In a preferred embodiment, the safety gate **10** of the present invention further comprises at least one first auxiliary connecting assembly **500** and at least one second auxiliary connecting assembly **600**. Each one of the at least one first auxiliary connecting assembly **500** and one of the wall-mounted post assemblies **100** are spaced from each other and located in the same vertical line. Each one of the at least one second auxiliary connecting assembly **600** is mounted on the main frame **200** and spaced from the connecting assembly **300** in another vertical line. The at least one first auxiliary connecting assembly **500** and the at least one second auxiliary connecting assembly **600** are pivotally and detachably connected to each other. Also, each one of the at least one first auxiliary connecting assembly **500** comprises an auxiliary column **510**, and each one of the at least one second auxiliary connecting assembly **600** forms an auxiliary hole **610**. The auxiliary hole **610** is located on and around the auxiliary column **510**. With the auxiliary column **510** sleeved in the auxiliary hole **610**, the main frame **200** can be fixed on the wall-mounted post assemblies **100** more stably. Precisely, an amount of the at least one first auxiliary connecting assembly **500** is two. The two first auxiliary connecting assemblies **500** are mounted on the two walls of the entrance respectively and spaced from the two wall-mounted post assemblies **100**. An amount of the at least one second auxiliary connecting assembly **600** is two. The two second auxiliary connecting assemblies **600** are respectively mounted on the first support rod **215** and the second support rod **225** and configured to stabilize the first frame portion **210** and the second frame portion **220**. In another embodi-

ment, the amounts of the first auxiliary connecting assembly **500** and the second auxiliary connecting assembly **600** are not limited thereto.

Then please refer to FIG. **1**. In a preferred embodiment, the safety gate **10** may comprise a wheel **700**. The wheel **700** is mounted on a side, away from the connecting assembly **300**, of the main frame **200**, which reduces the resistance of the main frame **200** during opening or closing. Precisely, the safety gate **10** may have multiple wheels **700** respectively mounted to one end, close to the corresponding wall-mounted post assembly **100**, of the second lateral rod **213**, and one end, close to the other corresponding wall-mounted post assembly **100**, of the fourth lateral rod **222**, and a portion where the second lateral rod **212** and the fourth lateral rod **222** are connected. Therefore, the first frame portion **210** or the second frame portion **220** may be moved smoothly.

Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and features of the invention, the disclosure is illustrative only. Changes may be made in the details, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A safety gate comprising:

two wall-mounted post assemblies respectively mounted on two walls of two sides of an entrance;

a main frame configured to block the entrance and comprising:

a first frame portion;

a second frame portion; and

two sliding sets connecting the first frame portion and the second frame portion and thereby the first frame portion and the second frame portion being capable of sliding with respect to each other for adjusting an overlapping area of the first frame portion and the second frame portion; and

two connecting assemblies respectively mounted on two ends of the main frame; each one of the connecting assemblies detachably connected to a respective one of the wall-mounted post assemblies; wherein:

each one of the two sliding sets comprises:

a first sliding component securely mounted on one end of the first frame portion and forming:

a first sliding channel; the second frame portion movably mounted in the first sliding channel; and

a second sliding component securely mounted on one end of the second frame portion and forming:

a second sliding channel; the first frame portion movably mounted in the second sliding channel;

when the first sliding component is pushed, the first frame portion moves with respect to the second frame portion; when the second sliding component is pushed, the second frame portion moves with respect to the first frame portion;

the first frame portion comprises:

a first lateral rod;

a second lateral rod; and

a plurality of first support rods, two ends of each one of the first support rods respectively connected to the first lateral rod and the second lateral rod;

the second frame portion comprises:

a third lateral rod;

a fourth lateral rod; and

a plurality of second support rods, two ends of each one of the second support rods respectively connected to the third lateral rod and the fourth lateral rod;

the first sliding components of the two sliding sets are respectively securely mounted on the first lateral rod and the second lateral rod, and the third lateral rod and the fourth lateral rod are respectively movably mounted in the first sliding channels of the first sliding components of said sliding sets;

the second sliding components of the two sliding sets are respectively securely mounted on the third lateral rod and the fourth lateral rod, and the first lateral rod and the second lateral rod are respectively movably mounted in the second sliding channels of the second sliding components of said sliding sets;

in each one of the two sliding sets:

the first sliding component further forms:

a first fixing chamber extending parallel to the first sliding channel; one end of the first lateral rod securely mounted in the first fixing chamber; and

the second sliding component further forms:

a second fixing chamber extending parallel to the second sliding channel; one end of the second frame portion securely mounted in the second fixing chamber;

the safety gate further comprises:

two stopping assemblies each respectively mounted on a corresponding one of the two wall-mounted post assemblies; each one of the stopping assemblies mounted on a side, which is close to the main frame, of the corresponding wall-mounted post assembly and capable of extending elastically in the corresponding wall-mounted post assembly, thereby configured to limit the respective connecting assembly connected to said wall-mounted post assembly;

each one of the wall-mounted post assemblies forms:

an installing chamber configured to receive the corresponding stopping assembly;

each one of the stopping assemblies comprises:

a stopping block; and

an elastic component, one of two ends of the elastic component mounted in the installing chamber of the corresponding wall-mounted post assembly and another one of the two ends of the elastic component connected to the stopping block so that an elastic force of the elastic component is exerted on the stopping block;

the installing chamber of each one of the wall-mounted post assemblies comprises:

a guiding track at a bottom surface of the installing chamber; and

the stopping block of each one of the stopping assemblies comprises:

a slide slot connected to the guiding track of the corresponding wall-mounted post assembly and capable of sliding with respect to the guiding track.

2. The safety gate as claimed in claim **1**, wherein the first frame portion and the second frame portion have:

a first state; in the first state, the first sliding component and the second sliding component abut each other; and

a second state; in the second state, the overlapping area of the first frame portion and the second frame portion being the largest overlapping area of the first frame portion and the second frame portion.

3. The safety gate as claimed in claim **2**, wherein:

each one of the wall-mounted post assemblies comprises:

a seat on a side, which is close to the main frame, of said wall-mounted post assembly; and

a connecting post on the seat;

each one of the connecting assemblies comprises:

a connecting hole; the connecting post of each one of the wall-mounted post assemblies mounted in the connecting hole of the connecting assembly.

4. The safety gate as claimed in claim **3**, wherein:

the stopping block of each one of the stopping assemblies comprises:

a guiding chamber;

each one of the wall-mounted post assemblies comprises:

a guiding block in the installing chamber and matching the guiding chamber of the stopping assembly in shape;

the elastic component of each one of the stopping assemblies connects the guiding chamber of the stopping assembly and the guiding block of the wall-mounted post assembly.

5. The safety gate as claimed in claim **4** further comprising:

a wheel mounted on a side, away from the connecting assemblies, of the main frame.

6. The safety gate as claimed in claim **1**, wherein:

each one of the wall-mounted post assemblies comprises:

a seat on a side, which is close to the main frame, of said wall-mounted post assembly; and

a connecting post on the seat;

each one of the connecting assemblies comprises:

a connecting hole; the connecting post of each one of the wall-mounted post assemblies mounted in the connecting hole of the connecting assembly.

7. The safety gate as claimed in claim **1**, wherein:

the stopping block of each one of the stopping assemblies comprises:

a guiding chamber;

each one of the wall-mounted post assemblies comprises:

a guiding block in the installing chamber and matching the guiding chamber of the stopping assembly in shape;

the elastic component of each one of the stopping assemblies connects the guiding chamber of the stopping assemblies and the guiding block of the wall-mounted post assembly.

8. The safety gate as claimed in claim **1** further comprising:

a wheel mounted on a side, away from the connecting assemblies, of the main frame.

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